



1645

## RAW SEQUENCE LISTING

DATE: 07/24/2002

PATENT APPLICATION: US/09/612,925B

TIME: 14:24:11

Input Set : A:\sequence listing.txt

Output Set: N:\CRF3\07242002\I612925B.raw

P4

**Does Not Comply  
Corrected Diskette Needed**

3 <110> APPLICANT: Cano, Carlos Antonio Durante  
 4 Nieto, Enrique Gerardo Guillen  
 5 Acosta, Anabel Alvarez  
 6 Munoz, Luis Emilio Carpio  
 7 Vazquez, Diogenes Quintana  
 8 Rodriguez, Carmen Elena Gomez Rodriguez  
 9 Rodriguez, Recardo de la Caridad Siva  
 10 Galvez, Consuelo Nazabal  
 11 Angulo, Maria de Jesus Leal  
 12 Dunn, Alejandro Miguel Martin  
 14 <120> TITLE OF INVENTION: System for the Expression of Heterologous Antigens as Fusion  
 Proteins  
 16 <130> FILE REFERENCE: LEXSA P-13DIV2  
 18 <140> CURRENT APPLICATION NUMBER: 09/612,925B  
 19 <141> CURRENT FILING DATE: 2000-07-10  
 21 <150> PRIOR APPLICATION NUMBER: 08/930,917  
 22 <151> PRIOR FILING DATE: 1997-09-16  
 24 <150> PRIOR APPLICATION NUMBER: CU97/00001  
 25 <151> PRIOR FILING DATE: 1997-01-17  
 27 <160> NUMBER OF SEQ ID NOS: 21  
 29 <170> SOFTWARE: PatentIn version 3.1  
 31 <210> SEQ ID NO: 1  
 32 <211> LENGTH: 47  
 33 <212> TYPE: PRT  
 34 <213> ORGANISM: Neisseria meningitidis  
 36 <400> SEQUENCE: 1  
 38 Met Leu Asp Lys Arg Met Ala Leu Val Glu Leu Lys Val Pro Asp Ile  
 39 1 5 10 15  
 42 Gly Gly His Glu Asn Val Asp Ile Ile Ala Val Glu Val Asn Val Gly  
 43 20 25 30  
 46 Asp Thr Ile Ala Val Asp Asp Thr Leu Ile Thr Leu Glu Thr Asp  
 47 35 40 45  
 50 <210> SEQ ID NO: 2  
 51 <211> LENGTH: 18  
 52 <212> TYPE: PRT  
 53 <213> ORGANISM: Neisseria meningitidis  
 55 <400> SEQUENCE: 2  
 57 Thr Thr Cys Cys Ala Thr Gly Gly Thr Ala Gly Ala Thr Ala Ala Ala  
 58 1 5 10 15  
 61 Ala Gly  
 65 <210> SEQ ID NO: 3  
 66 <211> LENGTH: 18  
 67 <212> TYPE: PRT  
 68 <213> ORGANISM: Neisseria meningitidis

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70 <400> SEQUENCE: 3
72 Thr Thr Thr Cys Thr Ala Gly Ala Thr Cys Cys Ala Ala Ala Gly Thr
73 1 5 10 15
76 Ala Ala
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81 <211> LENGTH: 26
82 <212> TYPE: PRT
83 <213> ORGANISM: Neisseria meningitidis
85 <400> SEQUENCE: 4
87 Gly Gly Cys Gly Gly Thr Thr Cys Thr Gly Cys Cys Gly Ala Thr Thr
88 1 5 10 15
91 Ala Ala Gly Gly Ala Thr Cys Cys Gly Ala
92 20 25
95 <210> SEQ ID NO: 5
96 <211> LENGTH: 146
97 <212> TYPE: PRT
98 <213> ORGANISM: Neisseria meningitidis
100 <400> SEQUENCE: 5
102 Thr Thr Cys Cys Ala Thr Gly Gly Thr Ala Gly Ala Thr Ala Ala Ala
103 1 5 10 15
106 Ala Gly Ala Ala Thr Gly Gly Cys Thr Thr Ala Gly Thr Thr Gly
107 20 25 30
110 Ala Ala Thr Thr Gly Ala Ala Ala Gly Thr Gly Cys Cys Cys Gly Ala
111 35 40 45
114 Cys Ala Thr Thr Gly Gly Cys Gly Gly Ala Cys Ala Cys Gly Ala Ala
115 50 55 60
118 Ala Ala Thr Gly Thr Ala Gly Ala Thr Ala Thr Thr Ala Thr Cys Gly
119 65 70 75 80
122 Cys Gly Gly Thr Thr Gly Ala Ala Gly Thr Ala Ala Ala Cys Gly Thr
123 85 90 95
126 Gly Gly Gly Cys Gly Ala Cys Ala Cys Thr Ala Thr Thr Gly Cys Thr
127 100 105 110
130 Gly Thr Gly Gly Ala Cys Gly Ala Thr Ala Cys Cys Cys Thr Gly Ala
131 115 120 125
134 Thr Thr Ala Cys Thr Thr Thr Gly Gly Ala Thr Cys Thr Ala Gly Ala
135 130 135 140
138 Ala Ala
139 145
142 <210> SEQ ID NO: 6
143 <211> LENGTH: 47
144 <212> TYPE: PRT
145 <213> ORGANISM: Neisseria meningitidis
147 <400> SEQUENCE: 6
149 Met Val Asp Lys Arg Met Ala Leu Val Glu Leu Lys Val Pro Asp Ile
150 1 5 10 15
153 Gly Gly His Glu Asn Val Asp Ile Ile Ala Val Glu Val Asn Val Gly
154 20 25 30
157 Asp Thr Ile Ala Val Asp Asp Thr Leu Ile Thr Leu Asp Leu Glu
158 35 40 45

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161 <210> SEQ ID NO: 7
162 <211> LENGTH: 16
163 <212> TYPE: PRT
164 <213> ORGANISM: Neisseria meningitidis
166 <400> SEQUENCE: 7
168 Cys Thr Ala Gly Ala Thr Thr Thr Gly Ala Thr Ala Thr Cys Ala Gly
169 1 5 10 15
172 <210> SEQ ID NO: 8
173 <211> LENGTH: 16
174 <212> TYPE: PRT
175 <213> ORGANISM: Neisseria meningitidis
177 <400> SEQUENCE: 8
179 Gly Ala Thr Cys Cys Thr Gly Ala Thr Ala Thr Cys Ala Ala Ala Thr
180 1 5 10 15
183 <210> SEQ ID NO: 9
184 <211> LENGTH: 15
185 <212> TYPE: PRT
186 <213> ORGANISM: Human immunodeficiency virus type 1
188 <400> SEQUENCE: 9
190 Ser Arg Gly Ile Arg Ile Gly Pro Gly Arg Ala Ile Leu Ala Thr
191 1 5 10 15
194 <210> SEQ ID NO: 10
195 <211> LENGTH: 15
196 <212> TYPE: PRT
197 <213> ORGANISM: Human immunodeficiency virus type 1
199 <400> SEQUENCE: 10
201 Arg Gln Ser Thr Pro Ile Gly Leu Gly Gln Ala Leu Tyr Thr Thr
202 1 5 10 15
205 <210> SEQ ID NO: 11
206 <211> LENGTH: 15
207 <212> TYPE: PRT
208 <213> ORGANISM: Human immunodeficiency virus type 1
210 <400> SEQUENCE: 11
212 Arg Lys Ser Ile Thr Lys Gly Pro Gly Arg Val Ile Tyr Ala Thr
213 1 5 10 15
216 <210> SEQ ID NO: 12
217 <211> LENGTH: 15
218 <212> TYPE: PRT
219 <213> ORGANISM: Human immunodeficiency virus type 1
221 <400> SEQUENCE: 12
223 Arg Lys Arg Ile His Ile Gly Pro Gly Arg Ala Phe Tyr Thr Thr
224 1 5 10 15
227 <210> SEQ ID NO: 13
228 <211> LENGTH: 15
229 <212> TYPE: PRT
230 <213> ORGANISM: Human immunodeficiency virus type 1
232 <400> SEQUENCE: 13
234 Arg Lys Arg Ile Thr Met Gly Pro Gly Arg Val Tyr Tyr Thr Thr
235 1 5 10 15

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238 <210> SEQ ID NO: 14
239 <211> LENGTH: 15
240 <212> TYPE: PRT
241 <213> ORGANISM: Human immunodeficiency virus type 1
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246 1 5 10 15
249 <210> SEQ ID NO: 15
250 <211> LENGTH: 15
251 <212> TYPE: PRT
252 <213> ORGANISM: Human immunodeficiency virus type 1
254 <400> SEQUENCE: 15
256 Thr Ser Ile Thr Ile Gly Pro Gly Gln Val Phe Tyr Arg Thr Gly
257 1 5 10 15
260 <210> SEQ ID NO: 16
261 <211> LENGTH: 15
262 <212> TYPE: PRT
263 <213> ORGANISM: Human immunodeficiency virus type 1
265 <400> SEQUENCE: 16
267 Arg Gln Arg Thr Ser Ile Gly Gln Gly Gln Ala Leu Tyr Thr Thr
268 1 5 10 15
271 <210> SEQ ID NO: 17
272 <211> LENGTH: 5
273 <212> TYPE: PRT
274 <213> ORGANISM: unidentified
276 <400> SEQUENCE: 17
278 Ala Gly Gly Gly Ala
279 1 5
282 <210> SEQ ID NO: 18
283 <211> LENGTH: 141
284 <212> TYPE: PRT
285 <213> ORGANISM: Human immunodeficiency virus type 1
287 <400> SEQUENCE: 18
289 Cys Ala Pro Thr Ser Ser Ser Thr Ala Gln Thr Gln Leu Gln Leu Glu
290 1 5 10 15
293 His Leu Leu Leu Asp Leu Gln Ile Phe Leu Ser Arg Gly Ile Arg Ile
294 20 25 30
297 Gly Pro Gly Arg Ala Ile Leu Ala Thr Ala Gly Gly Gly Ala Arg Gln
298 35 40 45
301 Ser Thr Pro Ile Gly Leu Gly Gly Ala Leu Tyr Thr Thr Ala Gly Gly
302 50 55 60
305 Gly Ala Arg Lys Ser Ile Thr Lys Gly Pro Gly Arg Val Ile Tyr Ala
306 65 70 75 80
309 Thr Ala Gly Gly Gly Ala Arg Lys Arg Ile His Ile Gly Pro Gly Arg
310 85 90 95
313 Ala Phe Tyr Thr Thr Ala Gly Gly Gly Ala Arg Lys Arg Ile Thr Met
314 100 105 110
317 Gly Pro Gly Arg Val Tyr Tyr Thr Thr Ala Gly Gly Gly Ala Ser Ile
318 115 120 125

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*inhib response - see item 10 on Eval*

*Summary*

*Sheet*

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Input Set : A:\sequence listing.txt

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325 <210> SEQ ID NO: 19
326 <211> LENGTH: 162
327 <212> TYPE: PRT
328 <213> ORGANISM: Human immunodeficiency virus type 1
330 <400> SEQUENCE: 19
332 Met Val Asp Lys Arg Met Ala Leu Val Glu Leu Lys Val Pro Asp Ile
333 1                      5                      10                      15
336 Gly Gly His Glu Asn Val Asp Ile Ile Ala Val Glu Val Asn Val Gly
337      20                      25                      30
340 Asp Thr Ile Ala Val Asp Asp Thr Leu Ile Thr Leu Asp Leu Asp Ser
341      35                      40                      45
344 Arg Gly Ile Arg Ile Gly Pro Gly Arg Ala Ile Leu Ala Thr Ala Gly
345      50                      55                      60
348 Gly Gly Ala Arg Gln Ser Thr Pro Ile Gly Leu Gly Gly Ala Leu Tyr
349 65                      70                      75                      80
352 Thr Thr Ala Gly Gly Gly Ala Arg Lys Ser Ile Thr Lys Gly Pro Gly
353      85                      90                      95
356 Arg Val Ile Tyr Ala Thr Ala Gly Gly Gly Ala Arg Lys Arg Ile His
357      100                     105                     110
360 Ile Gly Pro Gly Arg Ala Phe Tyr Thr Thr Ala Gly Gly Gly Ala Arg
361      115                     120                     125
364 Lys Arg Ile Thr Met Gly Pro Gly Arg Val Tyr Tyr Thr Thr Ala Gly
365      130                     135                     140
368 Gly Gly Ala Ser Ile Arg Ile Gln Arg Gly Pro Gly Arg Ala Phe Val
369 145                     150                     155                     160
372 Thr Ile
376 <210> SEQ ID NO: 20
377 <211> LENGTH: 202
378 <212> TYPE: PRT
379 <213> ORGANISM: Human immunodeficiency virus type 1
381 <400> SEQUENCE: 20
383 Met Val Asp Lys Arg Met Ala Leu Val Glu Leu Lys Val Pro Asp Ile
384 1                      5                      10                      15
387 Gly Gly His Glu Asn Val Asp Ile Ile Ala Val Glu Val Asn Val Gly
388      20                      25                      30
391 Asp Thr Ile Ala Val Asp Asp Thr Leu Ile Thr Leu Asp Leu Asp Ser
392      35                      40                      45
395 Arg Gly Ile Arg Ile Gly Pro Gly Arg Ala Ile Leu Ala Thr Ala Gly
396      50                      55                      60
399 Gly Gly Ala Arg Gln Ser Thr Pro Ile Gly Leu Gly Gln Ala Leu Tyr
400 65                      70                      75                      80
403 Thr Thr Ala Gly Gly Gly Ala Arg Lys Ser Ile Thr Lys Gly Pro Gly
404      85                      90                      95
407 Arg Val Ile Tyr Ala Thr Ala Gly Gly Gly Ala Arg Lys Arg Ile His
408      100                     105                     110
411 Ile Gly Pro Gly Arg Ala Phe Tyr Thr Thr Ala Gly Gly Gly Ala Arg
412      115                     120                     125

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VERIFICATION SUMMARY

DATE: 07/24/2002

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TIME: 14:24:12

Input Set : A:\sequence listing.txt

Output Set: N:\CRF3\07242002\I612925B.raw